

FIG. 1.

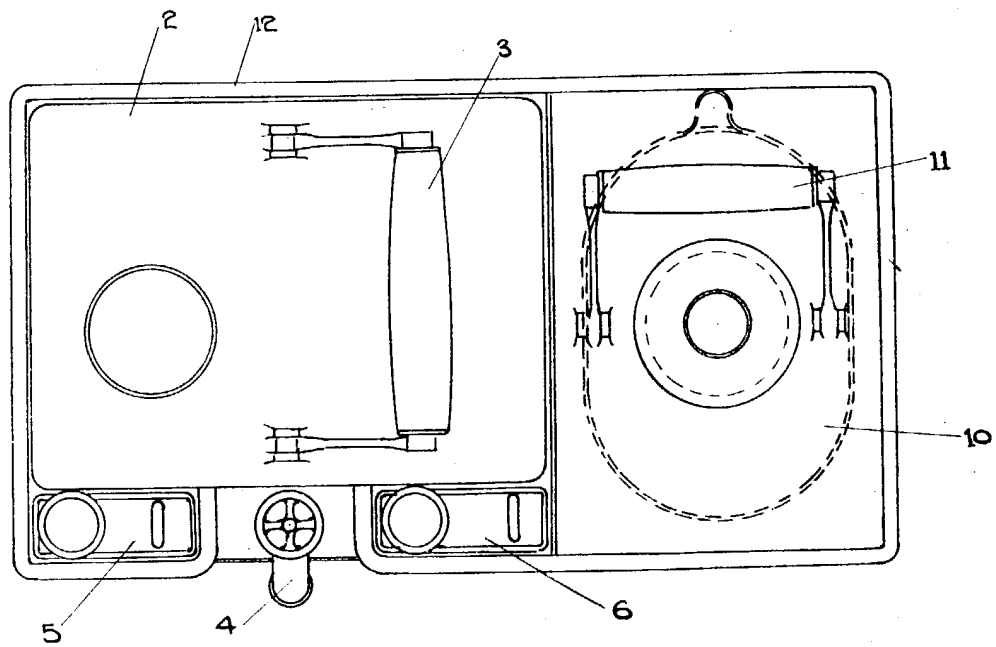
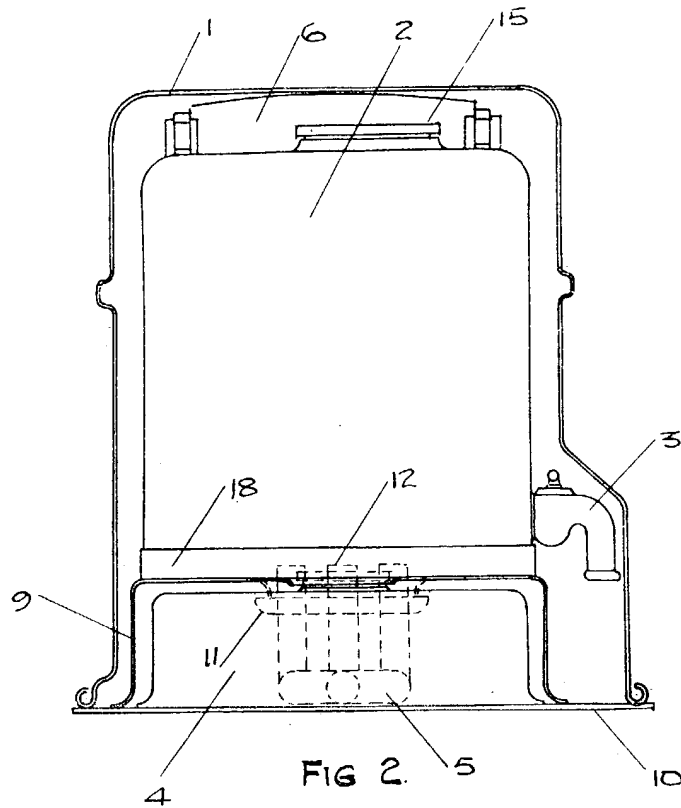


FIG. 3.





1

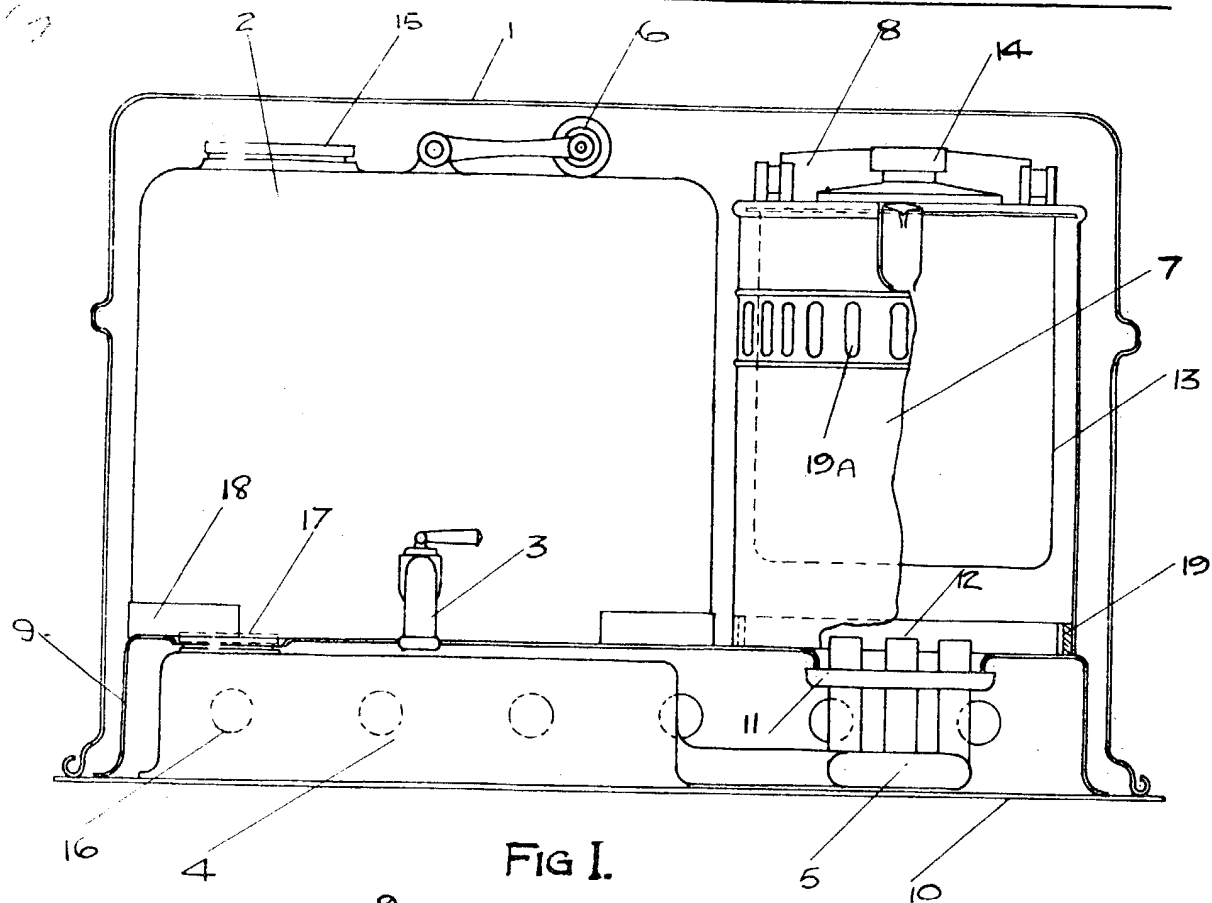


FIG. 1.

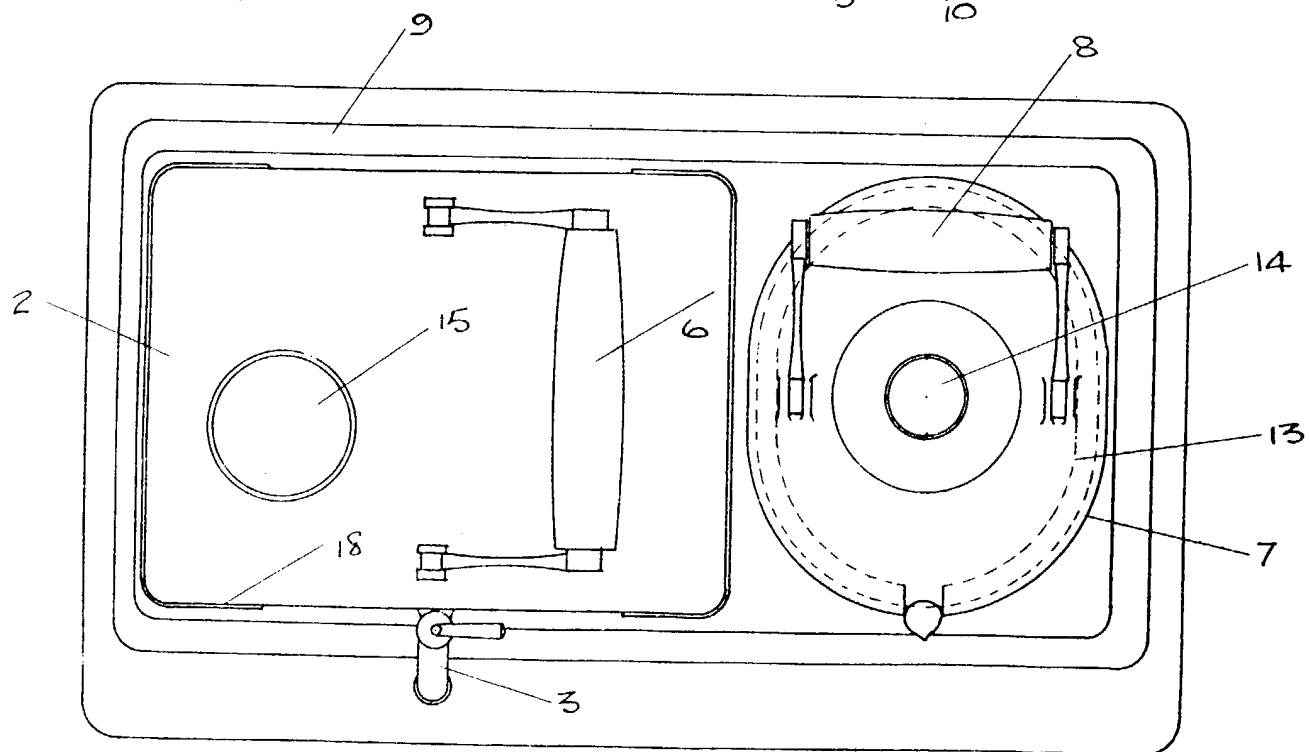


FIG. 3.



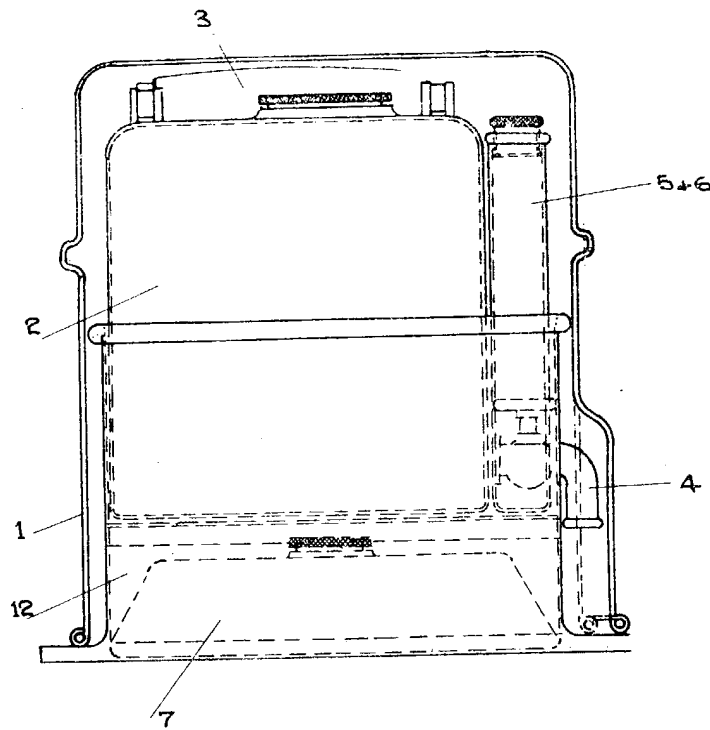


FIG. 2





# PATENT SPECIFICATION



Application Date: June 27, 1929. No. 19,755/29.

335,602

Complete Left: April 28, 1930.

Complete Accepted: Sept. 29, 1930.

## PROVISIONAL SPECIFICATION.

### Improvements in Portable Liquid-heating Apparatus.

I, WILLIAM IAN CECIL TOWNSEND, British Subject, 88, Harrow View, Harrow, Middx., do hereby declare the nature of this invention to be as follows:—

My invention relates to:—

A device, incorporating a reservoir for containing liquid, in particular, water, and a means of heating any liquid or water, to be used for any convenient purpose or in conjunction with a vehicle, in particular, a motor vehicle.

One method of constructing this device, may be described as follows:—Reference to the figures 1, 2, 3, on the accompanying drawing will render this method more easily understood.

Figures 1, 2, 3, are the side elevation, the end elevation, and the plan respectively, of this method of constructing my invention. A container (12), is so constructed that a detachable reservoir, or tank (2) fitted with a handle (3) and a tap (4) may be placed in position as shown, figs. (1, 2, 3,) the walls of the container (12) preventing any lateral movement of the reservoir or tank (2) when in its normal position.

Similarly two small containers (5 & 6) for carrying fuel and the like are also held in the container (12) substantially as shown in Figs. (1, 2, 3.)

Provision is also made in the container (12) for accommodating a receptacle (10) which is detachable and fitted with a handle (11). A lamp (7) fitted with a burner (8) is positioned beneath the reservoir (2) in such a manner that the heat generated by the burner (8) causes the contents of the receptacle (10) to become heated.

One end of the container (12) is provided with a number of holes (13) to permit the air to enter and allow the burner to function. These holes (13), may be shielded, rendering the device unaffected by wind or rain.

A hinged door (9), is provided to enable the lamp (7) to be withdrawn for re-filling.

When hot water or the like is required the receptacle (10) is lifted by means of the handle (11) from the container (12) and filled from the tap (4) after which it is replaced in the original position for the purpose of being heated by lamp (7). A casing (1) is fitted over this device as shown Figs. (1, 2, 3,) to exclude foreign matter and the like.

The device as described may be attached to the running board or any other convenient part of the motor vehicle.

Dated the 27th day of June, 1929.

W. I. C. TOWNSEND.

## COMPLETE SPECIFICATION.

### Improvements in Portable Liquid Heating Apparatus.

I, WILLIAM IAN CECIL TOWNSEND, (British) 88, Harrow View, Harrow, Middlesex, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

My invention relates to a form of portable liquid heating apparatus, for use in conjunction with a vehicle, such as a boat, caravan, motor vehicle, or the like.

It consists of a portable liquid heating apparatus comprising a base-plate adapted to support two independent and detach-

[Price 1/-]

able vessels, one for storing liquid in bulk and the other for heating smaller quantities and formed with an opening to receive the orifice of a burner located beneath the heater.

Reference to the accompanying drawing, on which are shewn Figures 1, 2 and 3, will indicate a suitable method of operation and manufacture of my invention. Figures 1, 2 and 3 are the side elevation, end elevation, and plan, respectively, of my invention.

The lower portion or base (9) of this apparatus is constructed in the form of

an inverted tray, having two openings conveniently positioned to accommodate the burners 12, and the filler cap 17, of the lamp reservoir 4, which is placed  
5 beneath the base 9, and attached thereto, by any convenient method, thus enclosing the lamp reservoir 4, the latter being fixed rigidly to the inside face of the base 9.

10 A tank or receptacle 2, for carrying a convenient quantity of liquid, fitted with a handle 6, tap 3 and filler cap 15, is placed, on the base 9, and prevented from moving thereon by means of small angular projections 18, as shewn substantially  
15 in Figure 1, 2 and 3.

A jacket 7 is also placed on base 9, in such a manner that its lower edge rests on and passes over an asbestos faced projection 19, rigidly attached to the base  
20 9, as shewn in Figure 1.

The asbestos faced projection 19, acts as partial insulator against any heat that would tend to be conducted from the  
25 jacket 7 to the base 9.

A small kettle or receptacle 13, in which to heat the liquid, fitted with a handle 8, and a lid 14, is constructed in such a manner that when placed inside the  
30 jacket 7, a ridge at its upper end rests on the upper extremity of the jacket 7, causing it to take up the position shewn in Figures 1, 2 and 3. When not in use a cover 1, is placed over the apparatus as described herein, thus protecting it from  
35 any rain, dust, or the like.

It can be seen that when required, the receptacle 13, can be removed from the jacket 7, charged with liquid from the tap  
40 3, and replaced in its original position for the purpose of heating. The burners 12, may then be ignited causing the sides as well as the base of the receptacle 13, to be heated.

At the same time as the hot air rises and passes out of the holes 19A in jacket 7, cool air enters through holes 16, in base 9. A baffle 11, is fitted to the burners 12 to prevent any excess of air pressure interfering with their combustion, but  
45 50 permitting a steady flow of air meanwhile.

Another feature of my invention is, that it is constructed in such a manner that its component parts remain in the same relative position to one another whether in transit or in use; it being only necessary to remove the outer cover for immediate operation. Also when in use it is unaffected by climatic  
55 60 conditions, such as wind, rain, or the like.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—  
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(1) A portable liquid heating apparatus comprising a base-plate adapted to support two independent and detachable vessels, one for storing liquid in bulk and the other for heating smaller quantities, and formed with an opening to receive the orifice of a burner located beneath the heater.  
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(2) A portable apparatus as claimed in claim (1) in which the heating vessel is placed in a support insulated from the base, so that the heat is not conducted to the reservoir.  
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(3) A combined liquid heating and storing apparatus substantially as described and shewn in the accompanying drawing.

Dated the 18th day of September, 1930.

W. I. C. TOWNSEND.